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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/472,816	12/28/1999	SHIGEKI TAMAI	925--124	9239

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EXAMINER

NGUYEN, DUNG T

ART UNIT PAPER NUMBER

2871

DATE MAILED: 02/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/472,816

Applicant(s)

TAMAI, SHIGEKI

Examiner

Dung Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 7, 8, 10 and 11 is/are rejected.
- 7) ☒ Claim(s) 4, 6 and 9 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4. 6) ☐ Other: .

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DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The disclosure is objected to because of the following informalities: reference numbers 26A, 26B (page 21) should be corrected as 24A, 24B, respectively.

Appropriate correction is required.

Claim Objections

3. Claims 1-11 are objected to because the abbreviated term (e.g. IC) needs to be defined before any abbreviation is introduced.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamazaki, US Patent No. 5,362,547.

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Claims 1-3 are anticipated by Yamazaki's figure 1 and accompany text which disclose a liquid crystal display (LCD) panel driver integrated circuit (IC) package comprising:

an flexible insulating base (insulating film 10);

an LCD panel driver IC (semiconductor device 14);

input leads (12) providing on the insulating base on one side of the LCD panel driver and connected to driver IC;

output leads (15A, 15B, 15C) providing on the insulating base on the other side of driver IC and connected to driver IC;

a bending slit (groove 17), wherein the output leads remain in the bending slit.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki, US Patent No. 5,362,547, in view of Applicant's submitted prior art, Nishioka, JP 6-3684.

Regarding claim 5, Yamazaki discloses the claimed invention as described above except for the input leads having first input leads and second input leads, a connecting slit, a resist-uncoated connection portion.

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Regarding claim 7, Yamazaki fails to disclose the LCD panel driver IC has two identical-signal terminals to which the first and second input leads are connected and such two terminals are connected to each other within the driver IC.

Nishioka does disclose an LCD panel driver IC package (figure 1) comprising:

an LCD panel driver IC (17) having two identical-signal terminals to which the first and second input leads are connected and such two terminals are connected to each other within the driver IC (figure 2);

first input leads (11) and second input leads (12) extending bilaterally outwardly generally perpendicularly to a direction in which output leads (15) from the driver IC (figure 1) a connecting slit (slit 13);

a resist-uncoated connection portion (connecting lead 14), wherein the connecting slit and the resist-uncoated connection portion are electrically connected to each other as claimed (figure 4).

It would have been obvious to one skilled in the art at the time of the invention was made to modify the Yamazaki's LCD panel driver IC package having two input leads and a driver IC as shown by Nishioka in order to provide a TCP for connection of liquid crystal driver which enables embodying the resultant liquid crystal module light and small (see purpose).

8. Claims 8 and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki, US Patent No. 5,362,547, in view of Applicant's submitted prior art, Nishioka, JP 6-3684, further in view of Ito et al., US Patent No. 5,748,179.

Although Yamazaki do not explicitly disclose how to connect the LCD panel driver IC package to an LCD panel (claims 8 and 10) as well as the LCD panel driver IC package are

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placed within a step region of the LC D panel (claim 11), Ito et al. do disclose an LCD module comprising a first glass substrate (SUB1), a second glass substrate (SUB2) and a liquid crystal layer (LC) therebetween, an LCD panel driver IC package is mounted on the glass substrate SUB1 (figures 14 and 15) to make an array (figure 22) as claimed. Therefore, it would have been obvious to one skilled in the art at the time of the invention was made to mount the Yamazaki's driver IC on the step portion of the glass substrate (e.g., periphery of the transparent substrate) as shown by Ito et al. in order to reduce the resistance between a driving IC and substrate (see col. 2, lines 64-65).

Allowable Subject Matter

9. Claims 4, 6 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter:

The references of record neither disclose nor make obvious an LCD device comprising an LCD panel driver IC in which connecting slits are respectively provided on parts of the insulating base where the first and the second input leads are provided, respectively, such that the first and second input leads are exposed in the connecting slits as set forth in claims 4.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. --.

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Tamai et al. (US 6,191,471), Maehara et al. (JP 1-251079) disclose a tape carrier package having a bending slit.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Nguyen whose telephone number is 703-305-0423. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 703-305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7726 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

DN
02/05/2003



Dung Nguyen
Patent Examiner
GAU 2871